

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

image forming stations arranged along a sheet transport path, each having an image carrier; a transfer/transport belt for holding and transporting downstream in a sheet transport direction a sheet for an image to be formed thereon by the image forming stations;

transfer electrodes in contact through the transfer/transport belt with the image carriers provided in the image forming stations; and

a voltage applying device for applying a voltage to the transfer electrodes,

wherein the voltage applying device, when a transfer process is not performed, applies a non-transfer bias voltage to only the transfer electrode in contact with the image carrier, the non-transfer bias voltage having the same polarity as transfer bias voltage and being lower than a transfer bias voltage.

2. An image forming apparatus according to claim 1,

wherein the voltage applying device applies a higher non-transfer bias voltage to a first transfer electrode positioned upstream with reference to the sheet transport direction than to the other transfer electrodes.

3. An image forming apparatus according to claim 1,

wherein the non-transfer bias voltage is increased as an electric potential of the image carriers increases.

4. An image forming apparatus according to claim 1, further comprising a sensor for detecting temperature and humidity around the transfer/transport belt,

wherein the voltage applying device adjusts the non-transfer bias voltage in accordance with the detection result of the sensor.

5. An image forming apparatus according to claim 1,

wherein the voltage applying device applies an increased non-transfer bias voltage to the transfer electrodes as rotational speed of the image carriers increases.